CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE
A. G. Kawamura, Secretary

DMS Notice
M-10-01

February 11, 2010

Discard: 04/01/2010

TO WEIGHTS AND MEASURES OFFICIALS

SUBJECT: Thermometer Testing

For newly purchased or repaired thermometers, the Division of Measurement Standards (DMS) Metrology Program will be performing a thermometer testing certification session on March 22, 2010.

Thermometers, currently used in enforcement, which should be tested are:

Electronic, dial, and/or liquid-in-glass thermometers recently purchased and/or repaired. Thermometers currently in the system and previously certified will be due during the Winter Conference of the California Agricultural Commissioners and Sealers Association (CACASA) in December. Please refrain from sending previously certified thermometers. This additional session is to assist the counties in putting recently purchased and/or repaired thermometers into service.

NOTE:

* Liquid-in-glass thermometers need to be transported upright to prevent liquid column separation.
* Digital thermometers must have new batteries and be operational.
* Each thermometer submitted for certification must have a seven digit serial number assigned by the county in accordance with enclosed Attachment B: Serialization of County Standards.

* Please make copies of the enclosed “Thermometer Data Sheet”. Complete the information in the shaded areas and return the data sheets to us with the thermometers.

Thermometers must be received before March 22, 2010 to be considered for certification.

If you have any questions, please contact Greg Boers, Principal State Metrologist at (916) 229-3022 or George Terrell, Measurement Standards Specialist at (916) 229-3024.

Sincerely,

Edmund E. Williams
Director

Enclosure

cc: Kristin Macy, Director, County Liaison Office

SOP 40
THERMOMETER DATA SHEET

Shaded areas MUST BE completed by Client   non-shaded DMS USE only

TEST NO.:   DATE: SUBMITTED BY: ____________________
(Client Name)

List only one thermometer manufacturer, model, and range in each section

Mfg: ______________________________ Model: ______________________ ASTM No.: _________
Select °F **If Dual Temp Scale**: °C_____ °F_____ Range: From________ To ________ Minimum Division _________
Liquid in Glass: Partial Immersion _______ Total Immersion ____ Electronic _____ Dial _____ Other: _____

DMS ID NO.	*	Mfg Serial No	[ ] [32°F/ 0°C]	[ ] [60°F/15.55°C]	[ ] [90°F/32.22°C]	[ ] [120°F/48.89°C]	REMARKS
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________

Mfg: ______________________________ Model: ______________________ ASTM No.: _________
Select °F **If Dual Temp Scale**: °C_____ °F_____ Range: From________ To ________ Minimum Division _________
Liquid in Glass: Partial Immersion _______ Total Immersion ____ Electronic _____ Dial _____ Other: _____

DMS ID NO.	*	Mfg Serial No	[ ] [32°F/ 0°C]	[ ] [60°F/15.55°C]	[ ] [90°F/32.22°C]	[ ] [120°F/48.89°C]	REMARKS
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________

Mfg: ______________________________ Model: ______________________ ASTM No.: _________
Select °F **If Dual Temp Scale**: °C_____ °F_____ Range: From________ To ________ Minimum Division _________
Liquid in Glass: Partial Immersion _______ Total Immersion ____ Electronic _____ Dial _____ Other: _____

DMS ID NO.	*	Mfg Serial No	[ ] [32°F/ 0°C]	[ ] [60°F/15.55°C]	[ ] [90°F/32.22°C]	[ ] [120°F/48.89°C]	REMARKS
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________

Mfg: ______________________________ Model: ______________________ ASTM No.: _________
Select °F **If Dual Temp Scale**: °C_____ °F_____ Range: From________ To ________ Minimum Division _________
Liquid in Glass: Partial Immersion _______ Total Immersion ____ Electronic _____ Dial _____ Other: _____

DMS ID NO.	*	Mfg Serial No	[ ] [32°F/ 0°C]	[ ] [60°F/15.55°C]	[ ] [90°F/32.22°C]	[ ] [120°F/48.89°C]	REMARKS
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________
________	[ ]	________	________	________	________	________	________

*** Place a [3] only if an old DMS ID# has been reused for a replacement.**

Attachment B

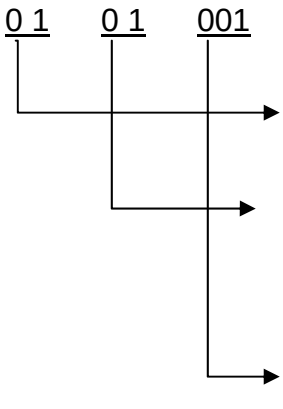
Serialization of County Standards

To maintain legal traceability of county weights and measures standards it is essential that they be identified by serialization in accordance with the following instructions:

1. Assigning Serial Numbers.

a. Each serial number will consist of 7 digits determined as follows:
(Do not use any county property or manufacturers' serial numbers)

b. The number will consist of 3 parts:



(Zeros are used to fill empty digits)

1st Two Digits - Your "county code" (see Table 1).
(Optional on the physical standard, mandatory on paperwork.)

2nd Two Digits - Assigned by you to describe location of standards (see Table II).

Last Three Digits - Assigned by you to describe the standards classification. (see Table III).

Standards which have identical descriptions, values and/or dimensional characteristics will have sequentially assigned 3-digit numbers. Example: Alameda County may have 4 each 50 lb. cast iron block office standards. The full serial numbers assigned to these standards could be:

01-01-001
01-01-002
01-01-003
01-01-004

2. Affixing Serial Numbers to Standards

Serial numbers may be affixed in one of the following suggested ways; please observe the associated precautions:

a. Mass (weight standards)

1. Weight sets or kits of any weight system,

largest single weight equal to 50 lb., 30 kg
Affix a label (such as a dyno-label) serial number to the weight set or kit.

2. Individual Weights

a) Cast Iron;

Use a 1/4-inch steel number stamping set to imprint the serial number into a top surface of the standard (The flat surface to either side of lifting bar is suggested.)

b) Non-Cast Iron;

20lb, 10kg or larger
Individual weights may require special marking if more than one identical weight exists in county. Affix a label (such as a dyno-label) for each mass standard to a surface immediately adjacent to its designated storage location.

Less than 20lb, 10kg
Store these masses in a box or container with a listing on contents. Affix a label (such as a dyno-label) serial number to the box or container.

b. Standards other than mass.

1. Label) - type or print the 7-digit serial number on a label (such as a dyno-label) and affix to a permanent surface of the standard.

Precaution: Adhesive labels will come off if attached to standards which are used around liquids, especially gasoline, oil, and solvents. Affix labels where they do not interfere with the measurement value or process of the standard.

2. Vibrating Scribe - scribe the serial number onto a permanent surface of the standard.

Precaution: Be sure that scribing does not damage the operation or measurement value of the standard.

TABLE I: COUNTY AND STATE CODE NUMBERS

County Name	Code	County Name	Code
Alameda	01	Orange	30
Alpine	02	Placer	31
Amador	03	Plumas	32
Butte	04	Riverside	33
Calaveras	05	Sacramento	34
Colusa	06	San Benito	35
Contra Costa	07	San Bernardino	36
Del Norte	08	San Diego	37
El Dorado	09	San Francisco	38
Fresno	10	San Joaquin	39
Glenn	11	San Luis Obispo	40
Humboldt	12	San Mateo	41
Imperial	13	Santa Barbara	42
Inyo	14	Santa Clara	43
Kern	15	Santa Cruz	44
Kings	16	Shasta	45
Lake	17	Sierra	46
Lassen	18	Siskiyou	47
Los Angeles	19	Solano	48
Madera	20	Sonoma	49
Marin	21	Stanislaus	50
Mariposa	22	Sutter	51
Mendocino	23	Tehama	52
Merced	24	Trinity	53
Modoc	25	Tulare	54
Mono	26	Tuolumne	55
Monterey	27	Ventura	56
Napa	28	Yolo	57
Nevada	29	Yuba	58

State	Code
Division of Measurement Standards	00

Table II: LOCATION CODE

Description of Location where Standards are Assigned	Location Code Numbers
Headquarters	01
Field Offices	02 to 10
Calibration Sites	11 to 20
Vehicles	21 to 99

TABLE III: STANDARDS CLASSIFICATION

Standards Subgroup Classification	Serial Number Sequence
Individual cast iron mass standards (not part of a boxed weight set or kit), 20lb, 10 kg or larger.	000 to 100
Mass Standards Weight sets or kits of any weight system from 50lbs/30kg or less	101 to 150
Individual non-cast iron mass standards (not part of a boxed weight set or kit), 20lbs, 10kgs or larger. Individual weights may require special marking if more than one identical weight exists in country.	151 to 200
Individual miscellaneous loose cast iron or non-cast iron mass standards (not part of a boxed weight set or kit) less than	201 to 300
Volume standards liquid or dry boxed sets or kits, any material, with largest individual measure of 1 gal/4L, or less	301 to 400
Volume standards liquid or dry individual provers, any metal, larger than 5 gal/20L	401 to 500
Volume standards liquid or dry individual measures, any material, 5gal/20L or less	501 to 600
Volume standards liquid or dry cubic measures – 1 cu yd; multiples or binary subdivisions of a cu ft; bushel and its subdivision; pipettes; etc. that are included in the measurement process	601 to 700
Length measurement devices	701 to 750
Time measuring devices	751 to 800
Temperature measuring devices	801 to 900
Watthour test Sets	901 to 950
Miscellaneous Standards	951 to 999